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ABSTRACT

This annual report of the V-TECS (Vocational-Technical Education Consortium of States) includes a progress report and an explanation of V-TECS itself. (V-TECS is a consortium whose principal objective is to produce catalogs of performance objectives, and performance guides for use in vocational-technical curriculum development.) First, the function of catalogs in the V-TECS system is described. A report of the V-TECS director includes a status report on catalogs, references to staff, bylaws, policies, committee structure, technical reference handbook, catalog revision and selection, curriculum development, and membership. An explanation of V-TECS' organizational structures includes a flow chart and descriptions of the functions of the administering agency, board of directors, technical coordinator task force, central staff, technical coordinators, and the project director. The V-TECS catalog development process is explained with the aid of a flow chart. Some of the areas included are catalog selection; state-of-the-art report; occupational inventory; population/sample design; field review process; and dissemination, in-service, and diffusion. The various uses of V-TECS catalogs and the V-TECS computer services and system are also discussed. A statement of catalog availability completes the report. Appendixes include names and addresses of V-TECS staff, directors, and members; glossary of terms; and catalog purchase agreement forms for reproduction license and restricted license. (CT)

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V-TECS

VOCATIONAL-TECHNICAL
EDUCATION CONSORTIUM
OF STATES

Fifth Annual Report of V-TECS July 1978

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Atlanta, Georgia 30308

V-TECS

FIFTH PROGRESS AND INFORMATION REPORT

PREPARED BY

V-TECS CENTRAL STAFF

August, 1978

CE 018 273

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INTRODUCTION

The principal objective of the Vocational-Technical Education Consortium of States (V-TECS) is the production of catalogs of performance objectives and performance guides for use in the development of vocational-technical curriculum. A comprehensive activity model directs catalog development by the V-TECS member states. Uniform procedures enhance the transportability of catalogs with a minimum of adaptation by their users.

Catalogs are organized around occupational domains consisting of up to five related occupational titles. For each domain, preliminary lists of tasks, tools, and equipment are developed by a review of existing literature. Preliminary lists are refined by extensive interviews of incumbent workers, compiled into an occupational inventory, and administered to a random sample of incumbent workers. Responses are obtained from incumbents relative to tasks performed, task time-spent, and tool and equipment use. These data are computer processed and reports are generated to identify tasks which will be converted to performance objectives. A preliminary version of the catalog of performance objectives and performance guides is prepared, reviewed by potential catalog users, and refined before the final catalog is released.

V-TECS member states (Figure 1) include Alabama, Delaware, Florida, Georgia, Illinois, Indiana, Kentucky, Louisiana, Maryland, Michigan, Mississippi, New York, Pennsylvania, South Carolina, Tennessee, Virginia, West Virginia, and Wisconsin. The Air Training Command, U.S. Air Force (represented by the Community College of the Air Force) and the U.S. Naval Education and Training Command are Associate Members.

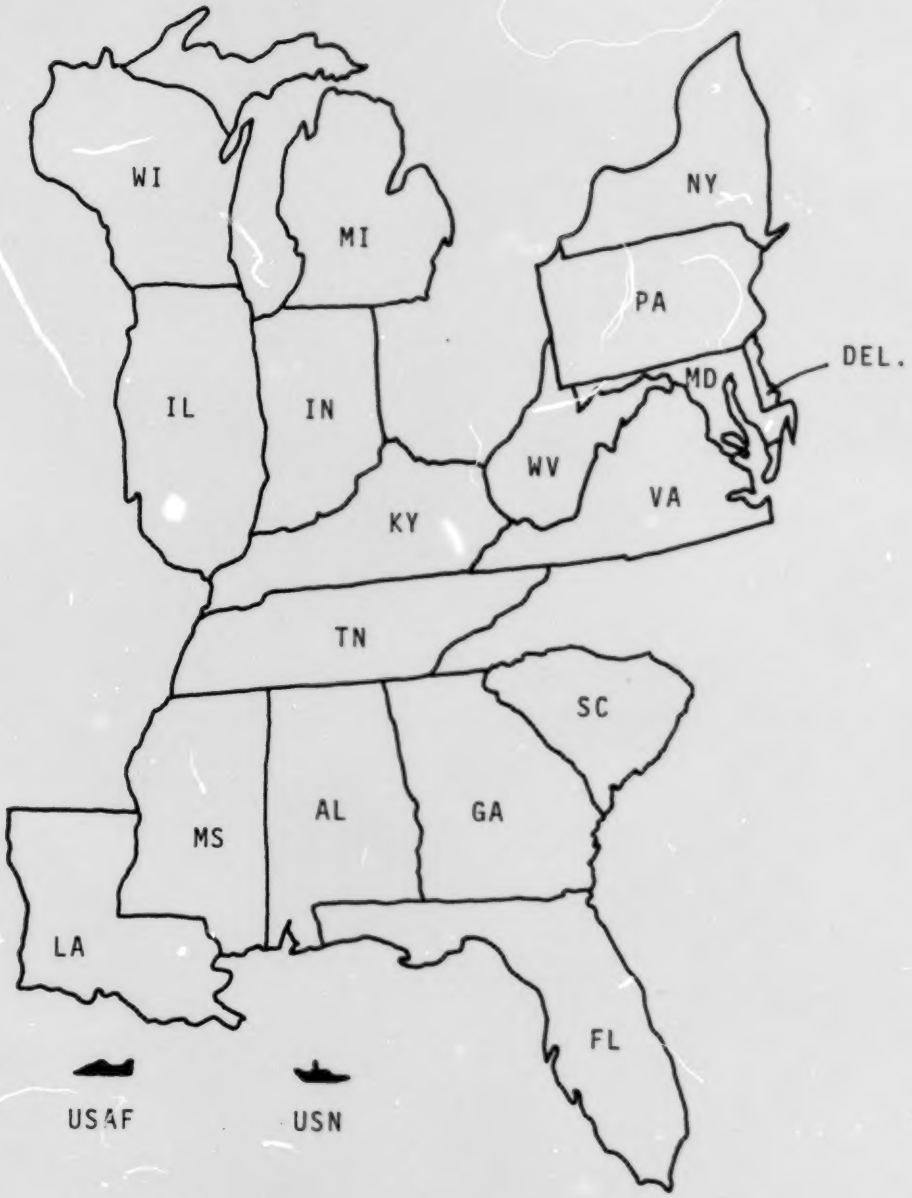

Figure 1

Member States

2.

REPORT OF V-TECS DIRECTOR

Introduction

During this past year, a number of changes have occurred in V-TECS which are worthy of note. Also, several suggestions for future development are included in this report.

Status Report on Catalogs

As of June 1, 1978, there are 41 catalogs (Figure 2) available for distribution to member states. Of the 41 catalogs, several are ready to be considered for revision. An anlysis of catalog development time shows that the average time for all catalogs completed to date is approximately 893 days, almost double the period of time identified for a normal cycle. There are many reasons given for delays which have occurred in the development process. The lack of available staff time in the state for catalog development appears to be the major problem. Where staff is available on a full-time basis, the catalogs usually follow the time line.

Staff

Two central staff members left the Consortium during the past year, with one of the positions filled February 1

Alterationist
Auto Body
Auto Mechanics
Auto Parts Clerk
Bank Teller
Bookkeeper
Carpenter
Cashier/Checker
Child Care
Combination Welder
Computer Programmer
Cosmetologist
Cotton Ginning
Data Processing
Dental Assistant
Emergency Med. Technician
Floriculture
Food Services
Gardening-Grounds
Home Furnishing
Hospital Ward Clerk
Hotel/Motel Management
Housing Manager
Industrial Sewing
Legal Secretary
Lic. Practical Nurse
Machine Shop
Masonry
Nurseryman
Nursing Assistant
Plumbing
Printing Occupations
Radio/TV Services
Secretary
Ship Operations
Small Engine Repair
Tax Collector
Textile Production
Timber Harvesting
Tractor Mechanics
Turf Management

Figure 2

Catalog Index

by Mr. Charles Losh. The Director position will be filled in November, 1978. In order to make staff operation as effective as possible, Mr. Losh has been appointed as Assistant Director.

Bylaws

The Bylaws have been revised and approved by the Board. The revised Bylaws clarify many questions and issues regarding the functional operation of the Consortium and provide for a more efficient Consortium.

Policies

The Executive Committee is developing policies for adoption by the Board during its October, 1978, meeting. A stringent system for modification of policies will be adopted, so that policies will require at least two meetings for modification, except in emergencies.

Committee Structure

The committee structure has been operational for three years and is proving to be an efficient method of expediting the business of the Board. A system needs to be established, however, to clarify the functions, responsibilities, and procedure of the committees. A staff member has been assigned as liaison for each of the committees to assist in their discussion and to provide support as needed. Representatives from the Coordinators have also been assigned to each committee.

A new committee on Diffusion has been created to deal with this important task.

Technical Reference Handbook

The staff and Technical Coordinators have worked on the revision of the Handbook and have recommended a time line for adoption by January 1, 1979. This revision will update the Handbook to reflect the current policies established by the Board.

Catalog Revision

The Board of Directors adopted catalog revision guidelines at the June, 1978, meeting. The revision cycle will be initiated in July with member states evaluating existing catalogs to prioritize candidates for revision.

Two catalogs will be revised by two states (one catalog for each state) in the near future as a pilot project for the revision process.

Revision procedures will closely parallel the existing new catalog development process, providing continuity in catalog format and the overall development process.

Catalog Selection

The Consortium has initiated a systematic method of selecting domain areas for catalog development.

To establish the need for a catalog in a specific domain area, Consortium members respond to an annual survey document on which they rate the major occupational areas

listed in the Dictionary of Occupational Titles. The areas are rated high, medium, or low in relation to the member states' need for a catalog in the domain. Results from the survey are compiled and a prioritized selection list which reflects the needs of the Consortium is distributed to Consortium members.

Using this procedure, a member can choose an occupational area for development which will be the most beneficial to the Consortium, and eliminate duplication of an existing catalog or development work in an area of low utility to the overall Consortium.

Curriculum Development

At the Board of Directors meeting in June, 1978, the following motion regarding V-TECS involvement with curriculum development was made and adopted:

> To promote and encourage the development of valid and reliable (in accordance with established standards) instructional materials for use by educators utilizing V-TECS Catalogs in Performance-Based Programs of Vocational/Technical Instruction.

In addition, a task force has been appointed to provide input to the Board regarding future V-TECS involvement in curriculum matters.

Membership

The U.S. Army Training Command has indicated an interest in joining V-TECS as an Associate Member. Formal action has not been taken as of this date, but Board action on the matter is anticipated this year.

Corclusion

This past year has been an excellent developmental year in the Consortium in spite of the loss of two key staff members. Much progress has been achieved in the revision and improvement of the process, policies, and concepts of the Consortium. While there has been some disagreement among states and members of the Board regarding content and procedure of catalogs, this can be looked at as a healthy sign demonstrating continued reassessment and concern for the quality of the Consortium's products. Therefore, we can look forward to an even stronger Consortium delivering products that are internationally recognized for quality.

3.

ORGANIZATIONAL STRUCTURE

Administering Agency

The administering agency of the Vocational-Technical Education Consortium of States (V-TECS) is the Southern Association of Colleges and Schools, Inc. (SACS). The primary objective of SACS is the improvement of education in the south and the nation through leadership and the promotion of cooperative efforts among colleges, schools and related agencies. Member institutions of SACS are grouped into the Commission on Elementary Schools, Commission on Secondary Schools, Commission on Occupational Education Institutions and Commission on Colleges.

V-TECS is a program under the Commission on Occupational Education Institutions (COEI). Although the primary responsibility of COEI is evaluation and accreditation of post-secondary vocational-technical education institutions, this agency also provides regional and national leadership in promoting improvement of vocational-technical and career education through research and evaluation activities.

Figure 3 illustrates the organizational structure and operational relationship of SACS/COEI/V-TECS. SACS/COEI provides central services, technical assistance, and administrative advice to V-TECS as needed and requested by the Board of Directors of V-TECS. Fiscal controls, personnel

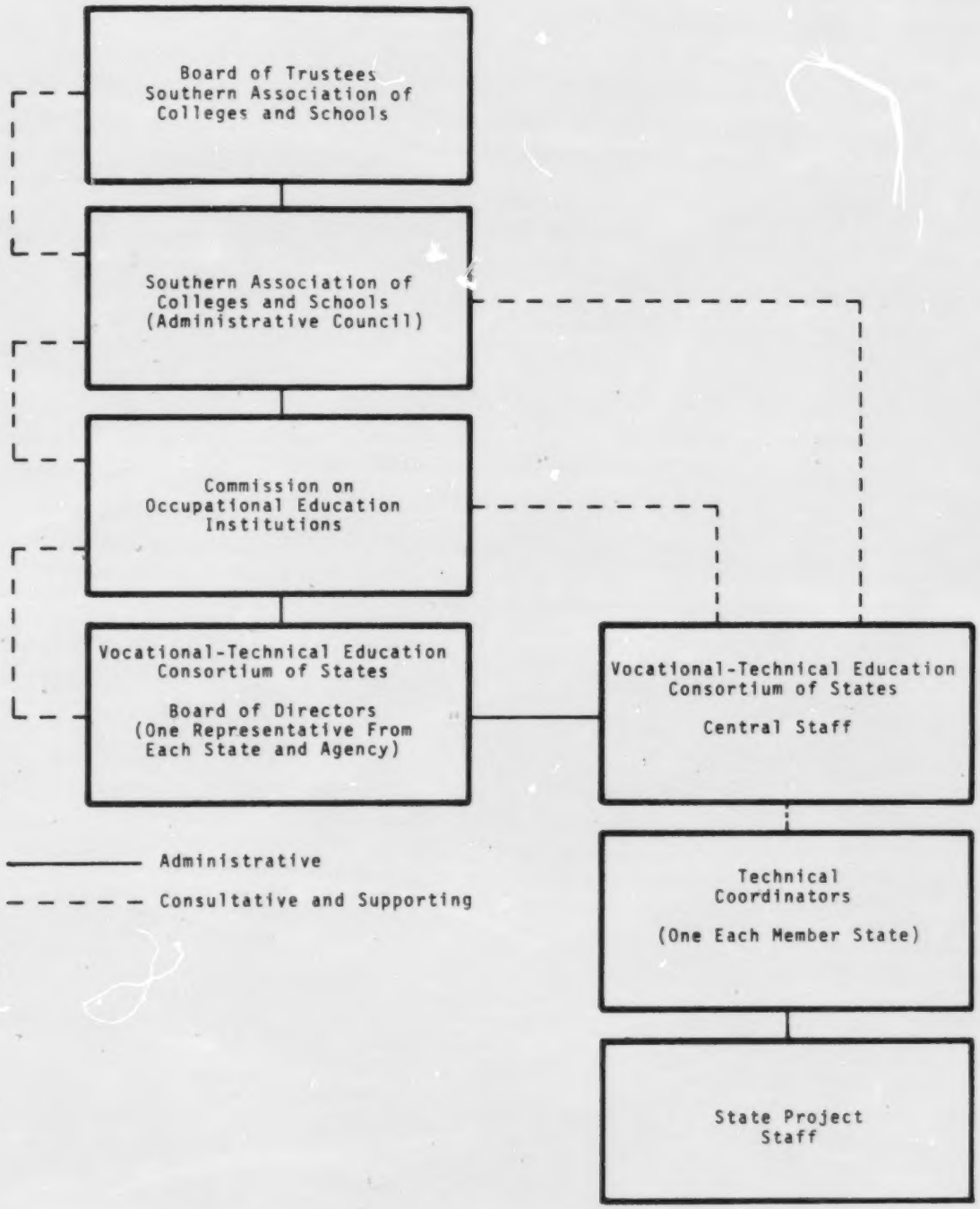

Figure 3

Organizational Structure

management, auditing, and other services available to members of SACS are provided to V-TECS on a shared-cost basis.

Board of Directors

The Board of Directors of V-TECS consists of one person from each state holding membership status in V-TECS. Associate membership is held by the Air Training Command, U.S. Air Force, and the U.S. Naval Education and Training Command, U.S. Navy.

Representatives to the Board of Directors are appointed by the person designated as State Director of Vocational Education in each state's Plan for Vocational Education. Reappointments to the Board and/or appointments of a new Board member are the option of the participating state.

The Board serves as the policymaking body for the Consortium and functions in committee roles to provide advice, technical assistance, and policy direction to the Director of V-TECS. The Board's standing committees are: Executive, Planning, Product Development, Evaluation, and Diffusion. (Appendix A contains a list of Board Members and Alternates.)

Technical Coordinator Task Force

The Technical Coordinator Task Force provides a formal structure for obtaining feedback from Technical Coordinators. Information concerning the implementation of policies and procedures is, thereby, made available to the Board to

enhance the quality of decisions. The concerns of project personnel are brought to the Task Force through a state's Technical Coordinator. A representative of this Task Force meets with the Product Development Committee.

Central Staff

The V-TECS central staff consists of the Director of V-TECS and five Technical Consultants. The Director is the chief administrative officer of the Consortium and provides direction to the staff and other technical personnel in keeping with Board policies. The central staff members have substantive experience in vocational-technical education, occupational analysis, and curriculum design and implementation, as well as technical expertise in the areas of research design, sampling techniques, data analysis, and computer program development.

The primary function of the central staff is to provide technical assistance and guidance to the member states, and assure the production of high quality products. Each staff member is assigned primary or secondary responsibility for product development and review. Specifically, staff members work with the state Technical Coordinators to:

1. provide technical assistance in planning V-TECS-related activities,

2. provide technical assistance in the design and implementation of occupational surveys,

3. provide technical assistance in the development of catalogs of performance objectives and performance guides,

4. conduct individual training and in-service workshops for catalog development personnel,

5. analyze occupational survey data and disseminate special statistical computer reports, and

6. coordinate dissemination and diffusion activities.

In addition, central staff performs various ad hoc assignments dealing with implementation of Board directives.

Technical Coordinators

The Technical Coordinator in each state has two primary functions: (1) to act as liaison between the state projects and the Consortium staff, and (2) to serve as a technical resource person for project personnel within the state. The Technical Coordinator has a key role in the success of projects in a particular state. The preparation and training of this person is vital to the proper functioning of the Consortium and, in particular, its activities within the state. Administratively, the Technical Coordinators are responsible to an administrator in the state, but are also responsive to the Consortium staff.

The Technical Coordinator conducts training sessions for project personnel and writing teams, echoing guidance received during in-service workshops conducted by the V-TECS staff. When local workshops are impractical, every effort is made to include project personnel in training sessions

conducted by central staff. If neither approach is practical, "one-on-one" training allows the Technical Coordinator to meet with individual project personnel.

Project Director

In most member states, a Project Director is named to conduct the preliminary research and develop the reports and products required for project completion. The Technical Coordinator is responsible for ensuring that Project Directors are trained to competently perform tasks associated with catalog development. All products are developed under the supervision and guidance of the Technical Coordinator. After checking the product for quality (based upon established criteria), the Technical Coordinator submits the product to the V-TECS central staff for review and approval.

4.

V-TECS CATALOG DEVELOPMENT PROCESS

The Vocational-Technical Education Consortium of States (V-TECS), by sharing services, technology, and resources, attempts to eliminate duplication of efforts in conducting occupational analysis and producing performance-based materials used in curriculum development. Rigorous developmental procedures are followed to ensure confidence in V-TECS catalogs and to aid transportability of these products. Catalog development procedures are delineated in a resource document, the V-TECS Technical Reference Handbook. All developmental reports and products are reviewed by the state Technical Coordinator and the V-TECS central staff using criteria approved by the V-TECS Board of Directors. The developmental steps are in sequence, with each step requiring approval prior to the completion of the next level, (Figure 4). The following is a brief description of the steps, reports, and products in the V-TECS catalog development.

Catalog Selection

Catalogs to be developed are selected from the prioritized list derived from the three-digit Occupational Groups in the Dictionary of Occupational Titles (4th ed.).

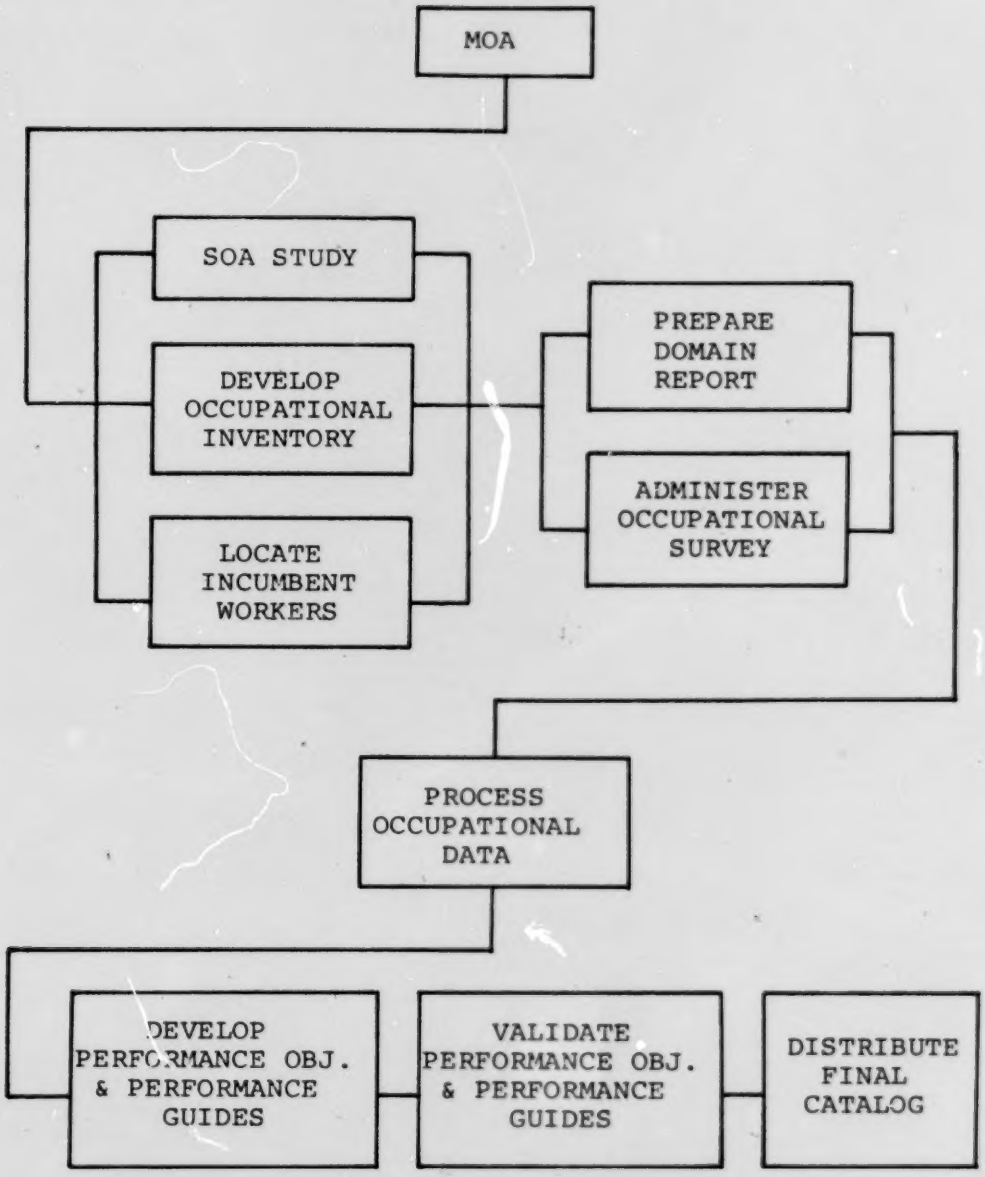

Figure 4

Development Process

Memorandum of Agreement

The Memorandum of Agreement (MOA) is an arrangement between V-TECS and the state agency developing a catalog. The MOA lists the following catalog descriptors: (1) project code number and domain area title, (2) instructional program classification of the Office of Education codes/titles, and (3) job codes and titles from the Dictionary of Occupational Titles.

State-of-the-Art Report

Following identification of the catalog area and the signing of the MOA, State-of-the-Art (SOA) research activities are initiated. The status of performance-based curriculum materials in the catalog area and additional information to assist in the catalog development are researched. Based upon objectives, research methods include: (1) correspondence with education, business, and industrial agencies, (2) interviews with incumbent workers, and (3) computer and/or manual searches of available literature. The objectives, research methods, and findings are documented in a State-of-the-Art Report. This Report provides the following information in the catalog area.

1. An assessment of existing curriculum materials.

2. Available lists of tasks performed by workers (to be reviewed, refined, and edited through interviews with workers for inclusion into the occupational inventory).

3. Tools and equipment used by workers (to be included in the occupational inventory).

4. Sources for the identification of a population of workers.

Findings from this research also provide a rationale for modification or refinements of codes and titles assigned at the MOA stage, if required.

Occupational Inventory

The tasks, tools and equipment identified in the SOA research provide the basis for the development of the occupational inventory. This step allows the researcher to assume face validity for the eventual inventory. As the task, tool, and equipment lists are reviewed, refined, edited, and revised through interviews with workers, an inventory emerges which includes groups of tasks within duty statements with assumed content validity. This inventory is then sent to a predetermined sample of workers, and from their responses construct validity is assumed. The procedures followed in the inventory development and application allow the researcher to assume face, content, and construct validity. Cronbach's Coefficient Alpha is computed from the responses, thus providing a measure of the internal consistency of responses to the inventory.

Population/Sample Design

Findings from the SOA Report provide the basis for procedures to delimit the population of workers from which a manageable sample can be drawn. A report including the identification of the population and any delimiting criteria is sent to the V-TECS central staff for review. Using a predetermined level of confidence and level of precision, a random sample is identified and this information is sent to the agency developing the catalog. These procedures identify (1) the nature of the population to be surveyed and (2) the workers/establishments to be surveyed.

Domain Report

The Domain Report contains an updated SOA Report, an approved Occupational Inventory (with developmental procedures listed), approved population/sampling design, and a list of all references found. This document is sent to all members of the Consortium. Essentially, this Report documents all reports/products since the signing of the MOA, records any modifications/refinements since the MOA, and describes what is proposed for the catalog development.

Data

Following completion of the occupational survey, the information from the inventories is put on data cards at the local level or the inventories are sent to V-TECS central office for processing. In either event, data are computer processed at the V-TECS central office. A number of data

reports (see page 27) are available for use in the development of the catalog.

Writing Team

The writing team analyzes the data from the occupational survey and develops the performance objectives and guides. The team includes instructors with subject matter expertise in the occupational area, supervisors of incumbent workers, and incumbent workers. Training of the team is provided by the V-TECS central staff and/or the developing agency.

Field Review Process

The inputs from the occupational survey and the writing team are compiled into a field review document. This product is then reviewed by a separate group that includes instructional personnel, content specialists, and curriculum development specialists. Once the review procedure is established, the performance objectives and guides developed by the writing team are evaluated to assist in the development of the final catalog.

Final Catalog

Using all the information from the signing of the MOA through the field review process, a final catalog for a specified domain area is compiled. This catalog contains:

1. an overview of the developmental process,
2. duty and task statements listed from the occupational inventory and writing team input,

3. performance objectives and performance guides for each task,

4. a list of tools/equipment for the domain area, and

5. a Cross-Reference Table which is an index of duties and tasks and performance objectives.

Once approved and completed, copies of the final catalog are sent to all Consortium members and Associate Members. Each catalog is also entered into computer storage at V-TECS central office.

Dissemination, In-Service and Diffusion

A diffusion plan for V-TECS products is required by V-TECS for each member state. Dissemination, in-service, and diffusion activities are conducted by the respective state.

5.

USES OF V-TECS CATALOGS

V-TECS catalogs are not in themselves curriculum, and the manner in which they are used is dictated by the needs of the user. For this reason, the Board of Directors has not attempted to suggest a specific delivery style. However, catalog format suggests certain applications as follows.

1. Performance Objectives may be compared to existing programs for inclusion. This does not mean that all users will adopt all objectives contained, but those objectives which are compatible with the user's goals can be adopted with the increased confidence provided by the strong data base. The users will have at their disposal various data, including the percentage of workers performing specific tasks (classified by D.O.T. codes) and the relative amount of time spent on each task.

2. Performance Objectives may be adopted as the basis for new curriculum development. This may be of special importance for the establishment of entirely new programs. In addition to the data described above, a tool and equipment list accompanies each catalog. This shows the percentage of workers that use specific tools and equipment. It is an invaluable source of information for new programs, considering the tremendous job of budgeting for costly pieces of equipment.

3. Performance Objectives may be shared with the student prior to instruction, revealing the anticipated competencies which will result from that instruction. This advantage is certainly not new with V-TECS catalogs, but it is often overlooked by those who design performance-based instruction.

4. Performance Objectives attained by students may be revealed to potential employers, thereby describing exactly those tasks which the student can perform and how well he/she can perform them. This is an advantage over previous practice, where one was only able to point to "X hours in drafting," or show the employer a completion certificate from "Do Rite Tech." Employers are becoming increasingly skeptical about workers who know about things. They want proof that the prospective employee can actually perform those tasks which must be done if the business is to survive. The V-TECS catalogs contain performance objectives which are predominantly of the psychomotor type, although it is understood that many knowledges lead to actual skill demonstration.

5. Performance Objectives may be used as the basis for developing criterion-referenced test items. Since the objective clearly states job relevant conditions for testing, the exact behavior to be demonstrated, and the degree of proficiency which must be attained, test items may be constructed to reflect conditions at the local level.

6. Performance Guides may be used to identify prerequisites such as minimum reading abilities, the ability to discriminate between colors and physical requirements. The user of a catalog could select those related tasks which are the object of instruction, then scrutinize the performance guides so that a composite picture might be develcped which adequately describes prerequisites. Counselors will be able to do a better job with such information. Common problems, such as getting uncoordinated typists, color-blind TV technicians, and illiterate file clerks could be reduced with such analysis.

7. Performance Guides may be used to assist in sequencing instructional units. As the pages are separated from the remainder of the catalog, the curriculum designer can lay them out and get a clearer picture of the best teaching sequence. There has been no attempt to sequence tasks in V-TECS catalogs because what is "proper" sequence to one user might not be acceptable to another. Therefore, sequencing is the responsibility of the user. The loose-leaf format of catalogs makes this easy to accomplish.

8. Performance Guides may be used as intermediate learning checkpoints which must be addressed in preparing the student for task accomplishment. The number of checkpoints required may vary, and may appear in any of several forms (cognitive, affective, or psychomotor). The catalog user may, therefore, focus on performance guides supporting each task which has been selected, and may develop as many

supporting (interim, subordinate, enabling, etc.) objectives as are needed. There has been no attempt to develop these supporting objectives within V-TECS catalogs, because the number required may well vary due to the different user groups involved. Only terminal performance objectives are included. However, judicious use of the performance guides will help the user to develop interim objectives.

This Section addresses only those applications of V-TECS catalogs which are most evident. As catalog users become more deeply involved in diffusion, additional uses will become apparent.

6.

COMPUTER SERVICES AND SYSTEM

Computer Services

The computer services offered to V-TECS members include the preparation of data for computer entry and the generation of computer reports developed from the information in the data banks (see Page 30). More than 20 specialized reports are developed by applying various statistical programs to the occupational information in the data banks. These reports are useful to curriculum developers and others requiring specialized, in-depth analysis of the occupational data.

The computer reports available include the following.

1. A "V-TECS Project Status and Product Availability Report" lists the status of all projects. This report is updated and distributed monthly.

2. "Task Selection Worksheets" provide selected information about each task. The writing team members use this information to assist in the development of performance objectives and performance guides.

3. "Task Time Spent Commonality Within D.O.T. Codes" is an analysis used to determine if tasks within different D.O.T. Codes are related.

4. A "Prioritized Percent Usage Tools/Equipment List" indicates the frequency with which workers use each item on the job. This report can be used to select tools/equipment for specific training needs or for purchasing equipment for new program areas.

5. An "Articulation Task List" is based upon tasks performed 0-12, 13-24, 25-36, and 37 and up months on the job. This report groups tasks into four time ranges and can be used for articulation between institutions.

6. A "Sequenced Total Utility Task List" is based upon three variables: Percent Members Performing, Time Spent, and Years on the Job. In this report each variable is treated independently, and a total utility ranking from high to low is established for each task. Users have a consolidated picture of each task, compared to other tasks in the inventory.

7. A "Cluster Catalog" is a compilation of related tasks with performance objectives and guides retrieved from several catalogs. Curriculum developers can design a specialized catalog of tasks and performance objectives based upon specific organization needs. Developers select catalogs from the V-TECS Catalog Index (see Page 5), and refine the content selection by D.O.T. Code and by the appropriate duty description from the V-TECS Catalog Content Listing. This identification data is then entered into the computer and the "Cluster Catalog" is compiled. These catalogs are supplemented by Entry Level Task Lists, Articulation Task Lists,

Prioritized Percent Usage Tools/Equipment Lists, or other computer reports.

All information is retrieved from the data banks, compiled to meet individual requests, and printed in a standardized format in camera-ready condition.

Computer System

SACS/V-TECS contracts with the University of Georgia for on-line access to three major computer systems for data storage and special report generation. At the V-TECS central office in Atlanta, system input and output capabilities are provided by a printer, card reader and Cathode Ray Tube (see Figure 5).

Occupational data from the incumbent workers surveys are stored on disc packs at the University of Georgia. Two data banks are maintained and accessed: the Occupational Information Data Bank and the Catalog Data Bank.

The Occupational Information Data Bank contains listings of 15,000 tasks and 10,000 related tools and equipment, all collected under more than 300 different job titles classified by D.O.T. Code. This information has been validated by more than 14,000 incumbent responses to occupational survey documents. This Data Bank contains lists of the tasks performed and the relative time spent in performance of those tasks by job incumbents, the number of job incumbents using each tool or piece of equipment, and other pertinent information on each job incumbent. Various computer reports are compiled from this data base.

V-TECS Central Office
Atlanta, Georgia

University of Georgia
Athens, Georgia

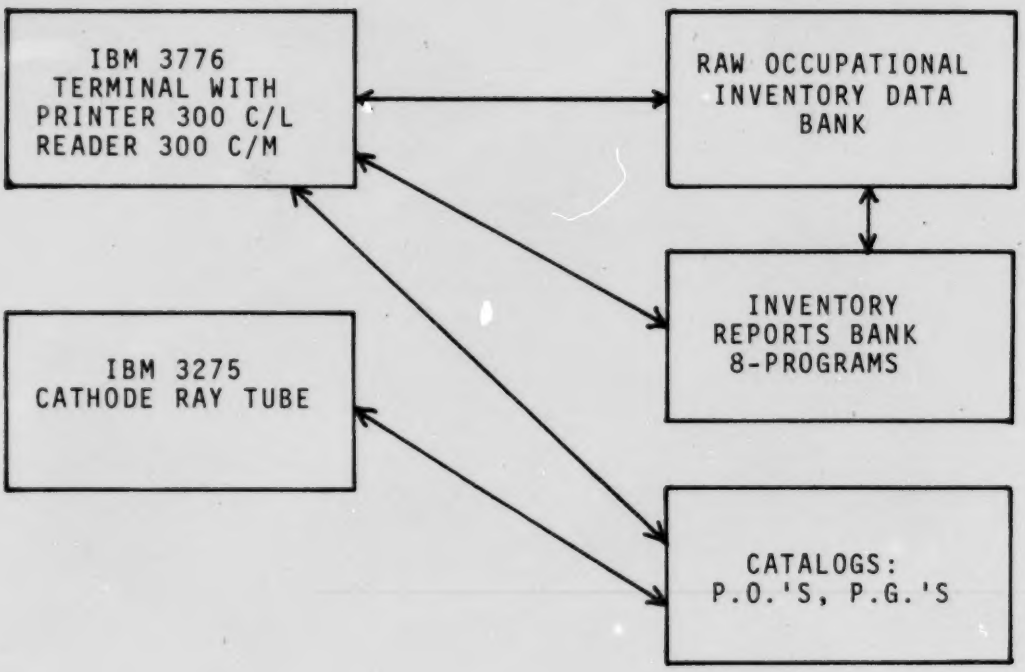

Figure 5

Computer System

The Catalog Data Bank presently contains 37 catalogs of tasks, performance objectives and performance guides. Any catalog in this data bank can be retrieved upon demand. This Data Bank is accessed to develop Cluster Catalogs of tasks, performance objectives and performance guides retrieved by subject area.

V-TECS continuously refines its computer services to provide assistance to the member states in new catalog development and the utilization of existing catalogs.

7.

CATALOG AVAILABILITY

Due to the high demand for the V-TECS catalogs from vocational curriculum developers and others, V-TECS is making the catalogs available to those outside of the Consortium.

The purchase price is based upon the recovery of the cost of development, presently $30,000 per catalog, and is structured at two levels. One fee structure conveys a license to reproduce and distribute copies of the catalog(s) within the state or territory of purchase order origination. The alternate fee does not convey a license to reproduce the catalog, but does make the catalogs available as reference documents.

Sample contracts are found in Appendix C.

APPENDICES

APPENDIX A

V-TECS
BOARD OF DIRECTORS, ALTERNATES AND TECHNICAL COORDINATORS

ALABAMA

Board Member
Miss Ruth Stovall, Branch Dir.
Program Services
State Dept. of Education
State Office Bldg.
Montgomery, Alabama 36104
205/832-3285

Alternate
Mr. James Kendrick
Curriculum Specialist
Div. of Vocational Education
State Office Bldg., Rm. 855
State Dept. of Education
Montgomery, Alabama 36104

Technical Coordinator
(same as Alternate)

FLORIDA

Board Member
Dr. John F. Crittenden
Bureau of Research, Dissemination & Evaluation
Vocational-Technical Ed.
Knott Building
Tallahassee, Florida 32304
904/488-1839

Alternate
Dr. K. M. Eaddy, Chief
Bureau of Research, Evaluation & Diffusion
Knott Building
Tallahassee, Florida 32304

Technical Coordinator
Dr. Wallace Hunter
Technical Coordinator
V-TECS Project
State Dept. of Education
226 West Jefferson St.
Tallahassee, Florida 32304

GEORGIA

Board Member
Mr. John Lloyd, Director
Program Development Support
Office of Adult & Voc. Ed.
State Office Bldg., Rm. 333
Atlanta, Georgia 30334
404/656-2547

Alternate
Mr. Medardo E. Sanchez
Staff Development Coordinator
Department of Education
333 State Office Building
Atlanta, Georgia 30334

Technical Coordinator
Mrs. Mary Harville
Technical Coordinator
State Department of Education
State Office Bldg., Rm. 333
Atlanta, Georgia 30334

ILLINOIS

Board Member
Dr. Ronald D. McCage, Mgr.
Research and Development
Dept. of Adult, Vocational
& Technical Ed., E-426
100 N. First St.
Springfield, Illinois 62777
217/782-0725

Alternate
Ms. Peggy Pool
Contract Administrator
Research & Development
Dept. of Adult, Vocational
& Technical Ed., E-426
100 N. First St.
Springfield, Illinois 62777

Technical Coordinator
(same as Alternate)

INDIANA

Board Member
Mr. Ed Hornback
State Coordinator of Supportive Services & Program Improvement
State Board of Vocational and Technical Ed.
17 West Market St.
Indianapolis, Indiana 46204
317/633-7673

Alternate
Dr. Bill West
V-TECS Coordinator
Indiana V-TECS
E & T Bldg., Rm. 1107
799 W. Michigan St.
Indianapolis, Indiana 46202

Technical Coordinator
(same as Alternate)

KENTUCKY

Board Member
Mr. Robert E. Spillman, Dir.
Program Supporting Services
2031 Capital Plaza Tower
Frankfort, Kentucky 40601
502/564-3096

Alternate
Dr. Charles D. Wade, Director
Program Development Division
Bureau of Vocational Ed.
2124 Capital Plaza Tower
Frankfort, Kentucky 40601

Technical Coordinator
Mrs. Melissa Briscoe
Coordinator
Competency Based Vocational Education Unit
2113 Capital Plaza Tower
Frankfort, Kentucky 40601

LOUISIANA

Board Member
Dr. Merline T. Broussard
Asst. Director of Administrative Services
Div. of Vocational Education
Department of Education
P.O. Box 44064
Baton Rouge, Louisiana 70804
504/389-2981

Alternate
Dr. Clarence Ledoux
Supervisor
Vocational Education Training
State Department of Ed.
P.O. Box 44064
Baton Rouge, Louisiana 70804

Technical Coordinator
(same as Alternate)

MARYLAND

Board Member
Dr. Robert E. Laird
Branch Chief
Instructional Programs Branch
Maryland State Dept. of Ed.
BWI Airport, P.O. Box 8717
Baltimore, Maryland 21240
301/796-8300

Alternate
Dr. Gerald F. Day, Mgr.
Curriculum Management System
Div. of Voc.-Tech. Ed.
Maryland State Dept. of Ed.
BWI Airport, P.O. Box 8717
Baltimore, Maryland 21240

Technical Coordinator
(same as Alternate)

MICHIGAN

Board Member
Mr. Philip Bailey
Supervisor of Secondary Unit
Voc. Ed. and Career Development Service
Michigan Dept. of Ed.
Box 30009
Lansing, Michigan 48909
517/373-3365

Alternate
Dr. Addison Hobbs
State Dir. of Vocational Ed.
Box 30009
Lansing, Michigan 48909

Technical Coordinator
Dr. Tommie U. Johnson
Technical Coordinator and Co-Director
V-TECS Project
Wayne State University
421 College of Education
Detroit, Michigan 48202

MISSISSIPPI

Board Member
Dr. James Wall, Assoc. Dean
College of Education
Mississippi State University
Box 5365
Mississippi State, Miss. 39762
601/325-5878

Alternate
Dr. Harry Holloway
Coordinator of Research, Curricula & Teacher Ed.
Vocational-Technical Division
State Department of Education
Mississippi State, Miss. 39762

Technical Coordinator
Dr. Edward L. Thomas
Technical Coordinator
Research Coordinating Unit for Vocational-Technical Ed.
Mississippi State University
Drawer DX
Mississippi State, Miss. 39762

NEW YORK

Board Member
Mr. Gerald L. Freeborne
Asst. Commissioner for Occupational Adult & Continuing Education
State Education Department
99 Washington Avenue
Albany, New York 12230
518/474-3981

Alternate
Mr. Douglas T. Adamson, Dir.
Div. of Occupational Education Instruction
State Education Department
99 Washington Avenue
Albany, New York 12230

Technical Coordinator
Mr. G. Earl Hay, Chief
Bureau of Occupational Ed. Curriculum Development
State Education Department
Albany, New York 12234

PENNSYLVANIA

Board Member
Dr. John W. Struck
State Dir. of Vocational Ed.
Pennsylvania Dept. of Ed.
Box 911
Harrisburg, PA 17126
717/787-5530

Alternate
Dr. Carroll Curtis
Director of Research Coordinating Unit
Pennsylvania Dept. of Ed.
Box 911
Harrisburg, PA 17126

Technical Coordinator
Dr. Clarence A. Dittenhafer
Education Research Associate
Department of Education
Research Coord. Unit for Vocational Education
Box 911
Harrisburg, PA 17126

SOUTH CAROLINA

Board Member
Dr. Emily T. Owens, Chief Supervisor of Program Planning and Development
Office of Voc. Education
904 Rutledge Building
Columbia, SC 29201
803/758-2482

Alternate
Mr. L. L. Lewis, State Director
Vocational Education
State of South Carolina
Department of Education
908 Rutledge Building
1429 Senate Street
Columbia, SC 29201

Technical Coordinator
Dr. Robert T. Benson
Vocational Instructional Materials Specialist
10 Tillman Hall
Voc. Education Media Center
Clemson University
Clemson, SC 29631

TENNESSEE

Board Member
Mr. Russell Smith, Chief of Program Services
Div. of Vocational Tech. Ed.
Tennessee Dept. of Education
200 Cordell Hull Building
Nashville, Tennessee 37219
615/741-1320

Alternate
Mr. John T. Leeman
Assistant Commissioner
Vocational & Technical Ed.
State Department of Education
200 Cordell Hull Building
Nashville, Tennessee 37219

Technical Coordinator
Mr. Guy E. Wilmoth
Educational Specialist
Program Services
Div. of Vocational Education
State Department of Education
205 Cordell Hull Bldg.
Nashville, Tennessee 37219

VIRGINIA

Board Member
Mr. L. M. Jewell, Jr.,
Coordinator
Vocational Ed. Research and
Statistical Information
State Department of Ed.
P.O. Box 60
Richmond, Virginia 23216
804/786-1206

Alternate
Dr. J. Dale Oliver
Assoc. Professor of Ed.
Div. of Voc. & Tech. Ed.
Virginia Polytechnic Inst.
and State University
Blacksburg, Virginia 24061

Technical Coordinator
(same as Alternate)

WEST VIRGINIA

Board Member
Mr. Clarence E. Burdette
State Director
Vocational Education
State Office Bldg. 6
1900 Washington St., East
Charleston, WV 25305
304/348-2346

Alternate
Dr. Adam Sponaugle
Director of Program Services
Bur. of Voc., Tech. &
Adult Education
State Office Bldg. 6
1900 Washington St., East
Charleston, WV 25305

Technical Coordinator
Dr. Fred W. Harrington
Coordinator of Curric. Dev.
Voc., Tech. & Adult Ed.
State Office Bldg. 6
1900 Washington St., East
Charleston, WV 25305

WISCONSIN

Board Member
Mr. Doyle Beyl
Bureau Director
Board of Voc., Tech. & Adult Ed.
4802 Sheboygan Ave., 7th Fl.
Madison, Wisconsin 53702
608/266-1354

Alternate
Mr. Roland Krogstad
Consultant, Research
Hill Farms State Office Bldg.
4802 Sheboygan Ave., 7th Fl.
Madison, Wisconsin 53702

Tecnnical Coordinator
(same as Alternate)

V-TECS
ASSOCIATE MEMBERS

U.S. AIR FORCE

Board Member
Lt. Col. Wade R. Kilbride
Chief, Professional Relations
Community College of the Air Force/RL
Lackland AFB, Texas 78236
512/671-3635

Alternate
Mr. Jeremiah J. Donahue
Education Specialist
Community College of the Air Force/RLO
Lackland AFB, Texas 78236

Technical Coordinator
(same as Alternate)

U.S. NAVY

Board Member
Dr. Worth Scanland, Director
Research & Program Development
Building 679
Naval Ed. & Training Command
Pensacola, Florida 32508
904/452-4201

Alternate
Mr. Dwight D. Davis
Career Development
Building 679
Naval Ed. & Training Command
Pensacola, Florida 32508

Technical Coordinator
(same as Alternate)

ADMINISTRATIVE AGENCY

Dr. Bob E. Childers
Executive Secretary
Commission on Occupational Education
Institutions
Southern Association of Colleges
and Schools
795 Peachtree Street, N.E.
Atlanta, Georgia 30308

V-TECS STAFF

Dr. Bob E. Childers, Director

Mr. Charles L. Losh
Assistant Director

Mr. Victor L. Harville
Technical Consultant for
Research and Statistical
Services

Dr. Tony M. Hinson
Technical Consultant for
Computer Systems & Services

Mr. Billy J. Koscheski
Technical Consultant for
Product Development
Services

Dr. J. Jerome Rohrbach, Jr.
Technical Consultant for
Research Services

APPENDIX B

GLOSSARY OF TERMS

ARTICULATION:
A curriculum design process used to coordinate secondary and post-secondary vocational program development.

CATALOG:
A comprehensive collection of performance objectives, performance guides and related data developed in a specific domain.

CLUSTER CATALOG:
A computer compiled catalog of related tasks, performance objectives and performance guides retrieved from several catalogs.

CONSORTIUM:
A group of state agencies, institutions, or other entities which have been legally constituted to work toward specific goals.

CRITERION-REFERENCED TEST ITEM:
An exercise based upon a performance objective and designed to measure attainment of that objective.

DICTIONARY OF OCCUPATIONAL TITLES (D.O.T.):
A document published by the U.S. Department of Labor, Employment and Training Administration. This publication groups occupations into systematic occupational classification structures based on interrelationships of job tasks and requirements.

DOMAIN (OCCUPATIONAL DOMAIN):
A group of job titles that are related on the basis of required skills and knowledge.

D.O.T. CODE:
A nine-digit number used to identify a specific job within a given domain.

DUTY:
A cluster of related tasks performed by incumbent workers in an occupation.

OCCUPATIONAL INVENTORY:
A survey instrument listing tasks performed and tools and equipment used by job incumbents.

O.E. CODE:
A code developed by the U.S. Office of Education to identify a specific cluster of related jobs for training program identifications.

PERCENT MEMBERS PERFORMING:
The percentage of the incumbent workers surveyed that perform a specific task.

PERFORMANCE-BASED INSTRUCTION:
Instruction which requires the learner's demonstration of specific competencies. The desired abilities are selected before the instruction is designed and are clearly defined as observable performance objectives.

PERFORMANCE GUIDE:
A series of steps required for performance of a task, arranged in the sequence ordinarily followed.

PERFORMANCE OBJECTIVE:
A statement, in precise measurable terms, of a particular behavior to be exhibited by a learner under specified conditions.

RELATIVE TIME SPENT (TIME SPENT):
A scale (1-7) used by incumbents to rank the time spent doing a specific task compared to the time spent doing any other task within the duty area.

TASK:
A unit of work which constitutes a significant part of a duty.

TECHNICAL REFERENCE HANDBOOK:
A procedural document used by V-TECS personnel in the catalog development process.

WRITING TEAM:
A group consisting of instructors with subject matter expertise, persons having knowledge and experience in developing performance-based instructional materials, incumbent workers, and supervisors of incumbent workers.

APPENDIX C

PURCHASE AGREEMENT

(REPRODUCTION LICENSE)

AGREEMENT, made this _____ day of _____, 19____, by and between THE SOUTHERN ASSOCIATION OF COLLEGES AND SCHOOLS, INC. hereinafter referred to as "SACS" and

_____

hereinafter referred to as the "PURCHASER."

WHEREAS, SACS through its Commission on Occupational Education Institutions (COEI) and the Vocational-Technical Education Consortium of States (V-TECS), has developed and is continuing to develop Catalogs of Performance Objectives and Performance Guides for use in vocational-technical education, and

WHEREAS, the Purchaser desires to obtain a license to use the catalogs specified on Schedule "B"

NOW THEREFORE, the parties hereto, for and in consideration of the mutual promises contained herein, hereby agree as follows:

1. Duties.

   A. SACS, through V-TECS, will furnish the following materials:

      Two camera-ready copies of each catalog selected by the Purchaser and specified on Schedule "B".

B. The Purchaser's authorized representative will:

(1) Pay V-TECS a total fee calculated from the fee structure in Schedule "A". The fee will be payable at the time of execution of this agreement.

(2) Report annually to V-TECS on the Purchaser's experience in using the catalog(s) selected.

(3) Adhere to all limitations indicated in Paragraph two (2), Limitations.

(4) Apprise V-TECS of the intended use of the catalogs purchased under this Purchase Agreement. This requirement will be satisfied by completing the "Intended Use" section of Schedule "B" of this Purchase Agreement.

2. Limitations

A fee which conveys a license to reproduce catalogs carries the following limitations:

(1) No catalogs or portions thereof may be reproduced in any medium for resale.

(2) Catalog reproduction and distribution is limited to the state or territorial boundaries where the purchase order originates. Exceptions require written approval by the V-TECS Board of Directors.

(3) Catalog reproduction and distribution is specifically limited to those catalogs identified on Schedule "B" and does not apply to any other products developed and distributed by V-TECS.

All rights for the control of copyrighted catalogs and other related materials are hereby expressly reserved to the Board of Directors of V-TECS.

3. Training and Consultative Services.

Training in the use of V-TECS materials obtained under this purchase agreement is available. On request by the Purchaser, these services will be arranged by V-TECS based upon a standard consultative fee and payment of expenses.

4. Term.

This Agreement will remain in effect for seven (7) years from the date Purchaser's signature is affixed.

5. Representations.

Both parties hereby represent that all necessary actions have been taken to fully authorize the individuals executing this Agreement to act on behalf of the respective parties and to bind

both parties to this Agreement by execution thereof.

SOUTHERN ASSOCIATION OF
COLLEGES AND SCHOOLS

Date	Director or Authorized Representative
	Name of Purchasing Agency
Date	Agencies' Authorized Officer, (Title)

PURCHASE AGREEMENT

(RESTRICTED LICENSE)

AGREEMENT, made this _____ day of _____, 19____, by and between THE SOUTHERN ASSOCIATION OF COLLEGES AND SCHOOLS, INC. hereinafter referred to as "SACS" and

_____

hereinafter referred to as the "PURCHASER."

WHEREAS, SACS, through its Commission on Occupational Education Institutions (COEI) and the Vocational-Technical Education Consortium of States (V-TECS), has developed and is continuing to develop Catalogs of Performance Objectives and Performance Guides for use in vocational-technical education, and

WHEREAS, the Purchaser desires to obtain a license to use the catalogs specified on Schedule "B"

NOW THEREFORE, the parties hereto, for and in consideration of the mutual promises contained herein, hereby agree as follows:

1. Duties.

   A. SACS, through V-TECS, will furnish the following materials:

      Two camera-ready copies of each catalog selected by the Purchaser and specified on Schedule "B".

B. The Purchaser's authorized representative will:

(1) Pay V-TECS a total fee calculated from the fee structure in Schedule "A". The fee will be payable at the time of execution of this agreement.

(2) Report annually to V-TECS on the Purchaser's experience in using the catalog(s) selected.

(3) Adhere to all limitations indicated in Paragraph two (2), Limitations.

(4) Apprise V-TECS of the intended use of the catalogs purchased under this Purchase Agreement. This requirement will be satisfied by completing the "Intended Use" section of Schedule "B" of this Purchase Agreement.

2. Limitations.

A license fee for restricted catalog use conveys no rights of reproduction or distribution in any form or by any means, electronic or mechanical. All rights for the control of copyrighted catalogs and other related materials are hereby expressly reserved to the Board of Directors of V-TECS.

3. Training and Consultative Services.

Training in the use of V-TECS materials obtained under this purchase agreement is available. On request by the Purchaser, these services will be arranged by V-TECS based upon a standard consultative fee and payment of expenses.

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5. Representations.

Both parties hereby represent that all necessary actions have been taken to fully authorize the individuals executing this Agreement to act on behalf of the respective parties and to bind both parties to this Agreement by execution thereof.

SOUTHERN ASSOCIATION OF
COLLEGES AND SCHOOLS

_____ _____
Date Director or Authorized Representative

_____
Name of Purchasing Agency

_____ _____
Date Agencies' Authorized Officer, (Title)

For a current list of available catalogs and information regarding the fee structure, contact:

V-TECS
Southern Association of
Colleges and Schools
795 Peachtree St., N.E.
Atlanta, Georgia 30308

404/875-8011